Secretary of Technology

Total Cost of Ownership (TCO) Evaluations Guidance

Memorandum October 19, 2001

MEMORANDUM

TO: Heads of Agencies and Institutions of Higher Education

FROM: Donald W. Upson, Secretary of Technology

SUBJECT: Total Cost of Ownership (TCO) Evaluations Guidance

The procurement and support of desktop technology has become increasingly complex, expensive and difficult to manage. For the last three years, the Council on Technology Services (COTS) and its Seat Management Workgroup have explored and advocated the principles of seat management to ensure every desktop, or seat, in state government is equipped with the state-of-the-art in PC technology. Seat Management provides a cost-effective means of refreshing PCs and related software and hardware components and treating desktop computing as a utility, like telephones and electricity.

Following the successful seat management pilot at the Virginia Department of Transportation, I created the Seat Management Section to assist agencies and institutions in transitioning to the Seat Management environment. Among other services, the Section provides assistance to agencies and institutions throughout the Commonwealth with their Total Cost of Ownership (TCO) studies. TCO studies are valuable benchmarking tools to assess direct and indirect costs associated with the desktop environment and provide valuable data to drive management decisions and reduce costs.

Chapter 1073 §4-5.06 b2 of the Appropriation Act of 2000 requires all executive branch agencies and institutions of higher education to perform a TCO evaluation, as prescribed by the Secretary of Technology and the Council on Technology Services, prior to acquiring any desktop computers.

As stated in my January 23, 2001, memorandum on Seat Management, agencies and institutions of higher education are exempted from performing a TCO evaluation if they are pursuing Seat Management. However, given the benefits of TCO evaluations as a support to a successful business management strategy, those migrating to a Seat Management environment should consider completing TCO evaluations.

Executive branch agencies and institutions of higher education shall use one of the TCO study approaches recommended by the Council on Technology Services (attachment 1) to meet the TCO evaluation requirement in the Appropriation Act of 2000.

Effective January 1, 2002, all executive branch agencies and institutions of higher education who are not pursuing seat management shall provide the following to the Seat Management Section of the Electronic Government Implementation Division prior to acquiring any desktop computers:

- an electronic copy of their completed TCO evaluation report
- the corresponding TCO metrics for the study approach selected
- an electronic copy of the data collection worksheets used and supporting documentation

Attachments

Attachment 1

Recommendation of the TCO Metrics Subgroup

Approved by the Seat Management Workgroup
April 23, 2001

Approved by COTS
July 9, 2001

RECOMMENDATION

Based on discussions with the TCO vendors and experience with TCO studies conducted by the Seat Management Section, the subgroup recommends that, at a minimum, the metrics listed in Table 1 and the Best Practices Implementation Status outlined in Table 2 be captured and reported by agencies and institutions of higher education.

Specifically, the subgroup identified three approaches to conducting a TCO study:

1. TCO studies based on the Gartner methodology

   Studies conducted by the TCO vendors and the Seat Management Section employ the Gartner methodology for distributed computing environments. Agencies and institutions can acquire the software and training to conduct studies using the Gartner methodology. These studies should provide the metrics and Best Practices Implementation Status noted in the tables.

2. TCO studies based on a Gartner-compatible methodology

   Agencies and institutions that have conducted a TCO study or plan to conduct a TCO study based on an industry recognized Gartner-compatible methodology should identify the methodology and provide at least Asset information (metrics A.1 – A.5), end user count (B.1), IT staff count (B.3), and direct hardware and software costs (C.1.a). In addition, the Best Practices Implementation Status should be completed.

3. TCO studies based on internally developed methodologies

   Agencies and institutions that have conducted a TCO study or plan to conduct a TCO study based on an internally developed methodology should provide a description of the methodology and data collection process. Based on the study, at least Asset information (metrics A.1 – A.5), end user count (B.1), IT staff count (B.3), and direct hardware and software costs (C.1.a) should be provided. In addition, the Best Practices Implementation Status should be completed.

For the second and third approaches, the Seat Management Section will work with the agency or institution to complete the TCO Best Practices Implementation Status table.

Table 1 – TCO Baseline Metrics

A. Assets

1. Current number of servers
2. Current number of client desktops
3. Current number of client mobile computers
4. Current number of peripherals
5. Current number of network devices

B. Staff Data

1. Number of end users counted in the evaluation
2. End user average unburdened salary used in the evaluation
3. Number of IT staff allocated to supporting and maintaining the distributed computing environment in the evaluation

C. Actual Cost Data

1. Direct Costs

    a. Hardware and software
    b. Operations
    c. Administration

2. Indirect Costs

    a. End User Operations
    b. Downtime

Table 2 – TCO Best Practices Implementation Status

Best Practices	Typical Scope	Typical Level
Technology Improvements - Asset Management		
Automated Asset Management	0-100%	**
Software Inventory	0-100%	**
Hardware Inventory	0-100%	**
Automated Software Distribution	0-100%	**
Technology Improvements - Systems Management		
Virus Detection and Repair	0-100%	**
Systems Management	0-100%	**
Server Based Client Image Control	0-100%	**
User State Management and Restore	0-100%	**
Technology Improvements - Managed PC		
Unattended Power Up	0-100%	**
Client Hardware Event Management	0-100%	**
Low Impact Upgradeability	0-100%	**
Technology Improvements - Scalability		
Scalable Architecture	0-100%	**
Low Risk, High Quality Vendor/Provider Selection	0-100%	**
Technology Improvements - Business Protection		
Fault Tolerance	0-100%	**
Automated Backup and Restore	0-100%	**
Hardware Physical Security Management	0-100%	**
Technology Improvements - Service Desk		
Service Desk Problem Management and Resolution	0-100%	**
Client Remote Control	0-100%	**
Process Improvements - User Management		
Enterprise Policy Management	0-100%	**
Locked User Environment	0-100%	**
Data Security Management	0-100%	**
Change Management	0-100%	**
Process Improvements - Standardization		
Vendor Standardization	0-100%	**
Platform Standardization	0-100%	**
Application Standardization	0-100%	**
Centralized and Optimized Procurement	0-100%	**
Process Improvements - Practice Management		
More Time Sp ent Planning Versus Implementing	0-100%	**
Service Level Tracking and Management	0-100%	**
Capacity Planning	0-100%	**
TCO Lifecycle Management	0-100%	**
People Improvements		
User Training	0-100%	**
IS Training	0-100%	**
IS Staff Highly Motivated	0-100%	**
Stable IS Organization	0-100%	**

**** Basic, Medium, or Advanced (See TCO Draft Guidelines)**